REMARKS/ARGUMENTS

Claims 24- 46 remain in this application. Claims 24-25 and 39 have been amended. The Applicants hereby confirm their election of Group II claims 24-46 for further prosecution of this application. Claims 1-23 are being withdrawn as directed to the non-elected invention, but without prejudice to Applicants' right to present such claims in continuing applications. Favorable reconsideration of this application in view of these amendments and the following remarks is respectfully requested.

Claims 24, 25, 34, 36 and 38 of the application stand rejected under 35 U.S.C. §102 as fully met by Chen et al., U.S. Patent No. 4,862,836 (Chen). Chen discloses the use of a honeycomb reforming catalyst to increase the octane number of a fuel stream being supplied to a combustion engine. Reconsideration and withdrawal of that rejection is respectfully requested in light of the amendment to claim 24 and the following remarks.

The process of Chen is not a process having utility for the large-scale reforming of a naptha feedstock, nor does it suggest the practical utility of a honeycomb catalyst for such a process. That is because the Chen process is carried out at relatively low pressures with a feedstock consisting of paraffinic naptha alone, or naptha combined with a small air (oxygen) addition (column 13, lines 2-7 of the reference). A fair reading of the Chen disclosure is that the disclosed honeycomb process produces relatively low C5+ yields (about 60-85% as in Table II, column 14, lines 46-55 of the patent). The reasons are not given but may possibly involve an excessive C5+ loss to lights through hydrocracking (Table I at page 2 of the Applicants' specification) and combustion. Thus Chen provides no disclosure upon which a skilled artisan could base any reasonable expectation that the honeycomb catalyst reforming process of that disclosure would have practical utility for the industrial reforming of naptha feedstreams. And in fact the low-pressure, naptha-only Chen process would not have any utility for that application.

The Applicants' process is useful for treating feedstreams comprising a combination of naptha and a large excess of hydrogen-containing recycle gas at a molar ratio of recycle gas to fresh naptha in the range of 3 to 8 (page 1, lines 20-24 and claim 24 of the application). Moreover the Applicants typically employ relatively high processing pressures (claim of the application) to preserve honeycomb catalyst activity. These are not pressures useful in engine intake systems, and they would in any case be avoided by Chen since they would be found to reduce aromatics formation and octane enhancement (page 2, lines 11- 14 of the specification).

For the above reasons it is respectfully submitted that the Chen disclosure fails to anticipate or suggest the subject matter of amended claims 24, 25, 34, 36 and 38 of the application, and therefore that the rejection of those claims under 35 U.S.C. §102 should be reconsidered and withdrawn.

The Examiner has further rejected claims 26-32, 37 and 39-46 as unpatentable over Chen under 35 U.S.C. §103. That rejection is respectfully traversed for the following reasons.

The Examiner has acknowledged that Chen fails to disclose geometric or compositional variations of the catalyst along the flowpath, the use of gamma alumina in the

catalyst, the Applicants' catalyst cell densities, surface areas and wall thicknesses, or the use of a plurality of reactors set out in the rejected claims. Thus the basis for the rejection is only that such features would have been obvious because processes incorporating them would still have been expected to be operative or effective. The Applicants respectfully submit that such a conclusion does not provide a proper basis for a finding of obviousness.

In essence the rejection is supported only by the finding that the Chen reference provides no teaching indicating that the Applicants' claimed features would not work. In order to support a rejection under 35 U.S.C. §103, however, the prior art must provide some positive suggestion or incentive to employ those features asserted to be obvious. Such a suggestion cannot be found in a reference that completely fails to even mention the claimed features, nor can it be implied from the failure of the reference to teach that such features would render a process ineffective or inoperative. Stated differently, the failure of a reference to teach away from the use of a feature is not equivalent to a positive suggestion to use that feature.

As Chen clearly fails to provide any mention, much less any positive suggestions, regarding the features of rejected claims 26-32, 37 and 39-46, the Applicants respectfully submit that the subject matter of those claims is neither taught nor suggested by Chen, and therefore that the rejection of those claims under 35 U.S.C. §103 should be reconsidered and withdrawn.

The Examiner has next rejected claim 33 of the application under 35 U.S.C. §103 as unpatentable over Chen taken with Schmidt et al., U.S. Patent No. 6,254,807 (Schmidt). The Schmidt patent teaches a catalytic process wherein the catalyst is a monolith comprising an alumina coating. The rejection on Schmidt is also respectfully traversed, for the following reasons.

The stated basis for rejecting claim 33 on reference to Chen and Schmidt is that the Schmidt catalyst would be expected to be effective in the Chen process. However, the two processes are entirely different, the Chen process involving the reforming of hydrocarbon fuels and the Schmidt process involving the reforming of a methane-oxygen feed stream by partial oxidation to produce hydrogen and carbon monoxide or syngas.

The differences between naptha reforming and the reforming of methane into syngas are clearly pointed out by the Applicants at page 6, lines 22-30 of the specification. Moreover, the unpredictability of catalytic activity is notorious and it has been long established in science and patent law that the activity of a catalyst for one reaction is no predictor of the activity of that catalyst for another reaction. Therefore, in view of the entirely different reactions involved in the two cited patents, the Schmidt reference cannot support the conclusion that the Schmidt catalyst would have obvious utility in the Chen process.

For the above reasons, the Applicants respectfully submit that the subject matter of claim 33 is not obvious from the combination of Chen and Schmidt, and therefore that the §103 rejection of claim 33 on reference to these patents should be withdrawn.

Finally the Examiner has rejected claim 35 of the application under 35 U.S.C. §103 as unpatentable over Chen taken with Holtermann et al., U.S. Patent No. 6,207,042

(Holtermann). Holtermann was cited to show the use of reforming catalysts that include halides such as chloride.

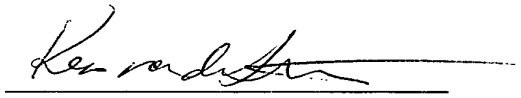
Reconsideration and withdrawal of this rejection is respectfully requested for the reason that the use of the Holtermann chloride catalysts in the Chen method would not be obvious, and for the further reason that even if obvious such use would not suggest the Applicants' process. Chen is unambiguous in requiring the use of a non-acid catalyst comprising a Group VIII hydrogenation catalyst in combination with an intermediate pore zeolite. Thus the substitution of a chloride catalyst into the method of Chen would require that an essential element of the Chen process be abandoned. Even if that were done, however, the resulting process would not anticipate or suggest the process of the rejected claim, because as noted above the Chen fuel enhancement process differs significantly from the Applicants' naptha reforming process, and thus neither anticipates nor suggests the latter process.

For the above reasons, the Applicants' respectfully submit that the subject matter of claim 35 is not obvious from the combined disclosures of Chen and Holtermann within the meaning of 35 U.S.C. §103, and therefore that the rejection of claim 35 on reference to those patents should be withdrawn.

In light of the foregoing amendments and remarks, the Applicants respectfully submit that the remaining claims of this application are now in condition for allowance. Accordingly favorable reconsideration of this application and the issuance of a Notice of Allowance herein are courteously solicited.

Applicants believe that no extension of time is necessary to make this Reply timely, but contingently request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as is necessary to make this Reply timely, if in fact such an extension is required. In that contingency the Office is hereby authorized to charge any necessary extension fee or surcharge to the deposit account of Corning Incorporated, Deposit Account 03-3325.

Respectfully submitted,



DATE: February 18, 2004

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